CLAIMS

WHAT IS CLAIMED IS:

1. an audio calibration system, comprising:

a control logic;

an input device coupled to said control logic;

a display coupled to said control logic;

a noise generator for generating a substantially random noise signal and coupled to said control logic;

a plurality of speakers coupled to said noise generator; and

delay modules coupled between said noise generator and said plurality of speakers for introducing time delays in the sound produced by the speakers.

2. The audio calibration system of claim 1 wherein the substantially random noise signal has an auto correlation of 0.

3. The audio calibration system of claim 1 wherein the substantially random noise signal is pseudo-random.

4. The audio calibration system of claim 1 wherein said plurality of speakers includes five speakers.

5. The audio calibration system of claim 1 wherein said control logic causes said display to display a visual image that indicates the relative position of a null line, wherein the position of the null line is determined by the time delays of the delay modules.

6. The audio calibration system of claim 1 wherein said input device is wirelessly coupled to said control logic.

7. The audio calibration system of claim 1 further including an inverter coupled between said noise generator and at least one delay module.

8. The audio calibration system of claim 7 further including a low pass filter coupled between said noise generator and said delay modules for low pass filtering the noise signal.

9. An audio calibration device, comprising:

a control logic;

an input device coupled to said control logic;

a noise generator for generating a substantially random noise signal and coupled to said control logic;

a low pass filter coupled to said noise generator for filtering the random noise signal from said noise generator;

an inverter coupled to said low pass filter;

a first delay module coupled to said inverter for introducing a time delay into an output signal from said inverter; and

a second delay module coupled to said low pass filter for introducing a time delay into an output signal from said filter, wherein said control logic controls the amount of time delay introduced by each delay module to thereby vary the location of a null line.

10. The audio calibration device of claim 9 further including a display unit coupled to the control logic for displaying a visual image indicative of the relative location of the null line.

11. The audio calibration device of claim 10, wherein said display controller includes an on-screen display controller implemented in a DVD decoder.

12. The audio calibration device of claim 10 further including a sound detector coupled to said control logic, said control logic determines the presence of the null line by processing an audio signal from said sound detector.

13. The audio calibration device of claim 10, wherein said noise generation and low pass filter are implemented using digital signal processing.

14. The audio calibration system of claim 10 further including speakers coupled to said delay module.

15. A method for calibrating an audio system including multiple speakers, comprising:

choosing one of the speakers to be a reference speaker;

providing substantially random noise to said reference speaker and a first speaker; and

tuning a time delay to one of the speakers provided with substantially random noise to adjust the location of a null line caused by said reference and second speakers.

16. The method of claim 15 further including:

providing substantially random noise to said reference speaker and a second speaker; and

tuning a time delay to one of the reference or second speakers to adjust the location of a null line caused by said reference and second speakers.

17. The method of claim 16 further including:

providing substantially random noise to said reference speaker and a third speaker; and

tuning a time delay to one of the reference or second speakers to adjust the location of a null line caused by said reference and third speakers.

18. The method of claim 15 wherein said tuning step includes:

receiving an audio signal from a microphone; and

processing said audio signal to determine a minimum amplitude level.

19. An audio calibration, including:

a means for generating a substantially random noise signal;

a delay means coupled to said noise signal generating means for introducing time delays in the substantially random noise signal; and

a means for controlling the amount of time delay introduced by said delay means to control the location of a null point.

20. The audio calibration system of claim 19 further including a filtering means coupled to said noise signal generating means for low pass filtering the substantially random noise signal.

21. The audio calibration system of claim 20 further including a means for displaying the relative location of the null point.

22. A computer readable storage medium for storing an executable set of software instructions which, when inserted into a host computer system, is capable of controlling the operation of the host computer, said software instructions being operable to calibrate the location of a null point associated with an audio system, said software comprising:

a means for generating a substantially random noise signal;

a delay means for selectively introducing a time delay into the substantially random noise signal; and

a means for controlling the amount of time delay introduced by said delay means to control the location of the null point.

23. The invention of claim 22 further including a means for low pass filtering the substantially random noise signal.

24. The invention of claim 23 further including a means for displaying the relative location of the null point.